

**PROGRAM DEBUG METHOD AND APPARATUS**ABSTRACT

5        The present invention provides for an apparatus employed to debug a program operating in a supplemental processor when the processor's registers are not readable directly by the debugging operation of a main processor. A program operating in main memory halts due to operational  
10      errors. The program code lines save to a cache. In the main processor, a pool of memory is reserved. A copy of the data from the nominally inaccessible supplementary processor registers also transfers to the reserved storage area for processing of the program needing debugging. After  
15      the program debugging is complete, a copy of the contents of the memory pool is restored to the memory of the target supplemental processor. A copy of the local store register state and remaining local store data returns to main memory.